

ABSTRACT OF THE DISCLOSURE

An optical assembly and methods of manufacturing the same include a longitudinal cavity, at least one optical waveguide being disposed in the longitudinal cavity having a predetermined length, and at least one water-swellable yarn being disposed within the longitudinal cavity and having a predetermined length. The predetermined length of the at least one water-swellable yarn being greater than the predetermined length of the at least one optical waveguide. The at least one water-swellable yarn is disposed longitudinally relative to the at least one optical waveguide so that the at least one water-swellable yarn and the at least one optical waveguide generally act as independent bodies within the longitudinal cavity.

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